γ¹/₂
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1. A method comprising:

detecting that a processor's frequency has changed in response to processor cooling; and

generating an interrupt in response to the detection of the frequency change.

- 1 2. The method of claim 1 including providing an 2 interrupt to an operating system.
- 1 3. The method of claim 1 including reading the performance state of the processor in response to the interrupt.
- 1 4. The method of claim 3 including determining a new 2 performance state.
- 5. The method of claim 4 including scheduling a bandwidth allocation.
- 1 6. The method of claim 2 including setting up a 2 periodic timer.
- 7. The method of claim 6 including monitoring the processor temperature at periodic intervals.
- 8. The method of claim 1 including detecting a high temperature or a low temperature interrupt and reading the processor performance state in response to the detection of a high temperature or a low temperature interrupt.

- 1 9. The method of claim 1 wherein detecting a
- 2 frequency change includes detecting a processor phase
- 3 locked loop event.
- 1 10. The method of claim 1 including using hardware
- 2 controlled throttling.
- 1 11. An article comprising a medium storing.
- 2 instructions to enable a processor-based system to:
- detect that a processor's frequency has changed
- 4 in response to processor cooling; and
- 5 generate an interrupt in response to the
- 6 detection of the frequency change.
- 1 12. The article of claim 11 further storing
- 2 instructions to enable a processor-based system to provide
- 3 an interrupt to an operating system.
- 1 13. The article of claim 11 further storing
- 2 instructions to enable a prodessor-based system to read the
- 3 performance state of the processor in response to the
- 4 interrupt.
- 1 14. The article of claim 1/3 further storing
- 2 instructions to enable a processor-based system to
- 3 determine a new performance state.

- 1 15. The article of claim 14 further storing 2 instructions to enable a processor-based system to schedule
- 3 a bandwidth allocation.
- 1 16. The article of claim 12 further storing
- 2 instructions to enable a processor-based system to set up a
- 3 periodic timer.
- 1 17. The article of claim 16 further storing
- 2 instructions to enable a processor-based system to monitor
- the processor temperature at periodic intervals.
- 1 18. The article of claim 11 further storing
- 2 instructions to enable a processor-based system to detect a
- 3 high temperature or a low temperature interrupt and read
- 4 the processor performande state in response to the
- 5 detection of a high temperature or a low temperature
- 6 interrupt.
- 1 19. The article of claim 11 further storing
- 2 instructions to enable a processor-based system to detect a
- 3 processor phase locked loop event.
- 1 20. The article of claim 11 further storing
- 2 instructions to enable a processor-based system to use
- 3 hardware controlled throttling.

- 21. A system comprising: 1 2 a processor; a temperature sensor coupled to said processor; 3 4 and a storage storing instructions that enable the 5 processor to detect that the processor's frequency has 6 7 changed in response to processor cooling and generate an interrupt in response to detection of the frequency change. 8
- 1 22. The system of claim 21 including a storage 2 storing an operating system, said interrupt being provided 3 to the operating system.
- 23. The system of claim 21 wherein said storage stores instructions that enable the processor to read the performance state of the processor in response to an interrupt.
- 1 24. The system of claim 21 wherein said processor 2 determines a new performance state.
- 1 25. The system of claim 24 wherein said storage 2 stores instructions that enable the processor to schedule a 3 bandwidth allocation.
- 26. The system of claim 22 wherein said storage stores instructions that enable the processor to set up a periodic timer.

- 27. The system of claim 26 wherein said storage stores instructions that enable the processor to monitor the processor temperature at periodic intervals.
- 28. The system of claim 21 wherein said storage stores instructions that enable the processor to detect a high temperature or a low temperature interrupt and read the processor performance state in response to the detection of a high temperature or a low temperature interrupt.
- 29. The system of claim 21 wherein said storage stores instructions that enable the processor to detect a processor phase locked loop event.
- 30. The system of claim 21 including hardware controlled throttling.